

# ERGONOMIC AUXILIARY SCREEN AND DISPLAY SUBSYSTEM FOR PORTABLE HANDHELD DEVICES

## ABSTRACT

A portable hand-held device having a main display is provided with an auxiliary display that effectively doubles the useful viewing area. An auxiliary display video memory is allocated in memory and managed by a microprocessor within the device. The auxiliary display is either pivotally or slidably mounted to a body portion of the device, preferably adjacent an outside edge of the main display to provide concurrent dual-display viewing and optional contiguity of displayed subject matter. A video memory management mechanism for managing the dual-display video memory in memory and for enabling pixel data to one or both of the displays may be hardware assisted, as by use of a high-speed video replay and/or rendering hardware mechanism. When not deployed for viewing, the auxiliary display folds or slides within the general confines of the body of the hand-held portable device, which may be a personal digital assistant (PDA), pocket personal computer (PC) or personal digital assistant (PDA).